

September 20, 2004

TO: Members of the MAG RASP Policy Committee

FROM: Mayor Elaine Scruggs, Glendale, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, October 13, 2004  
MAG Office, Suite 200, Saguaro Room  
302 North 1<sup>st</sup> Avenue, Phoenix

A meeting of the MAG RASP Policy Committee will be held at the time and place noted above.

Members of the MAG RASP Policy Committee may attend **either in person or by telephone conference call**. Those attending by telephone conference call are requested to call 602-261-7510 between 12:50 and 1:00 p.m. After prompting, please enter the meeting ID number 2842 on your telephone key pad followed by the pound key. If you require assistance, please dial 0 after calling the number above.

Please park in the garage under the Compass Bank Building at the Corner of 1<sup>st</sup> Avenue and Van Buren in an unreserved space. Bring your ticket to the meeting and parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting me at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Please be advised that under procedures approved by the MAG Regional Council on June 26, 1996, all MAG committees need to have a quorum to conduct business. A quorum is a simple majority of the membership or nine (9) for the MAG RASP Policy Committee. If you have any questions or need additional information, please contact me at (602) 452-5014.

## TENTATIVE AGENDA

1. Call to Order

2. Call to the Audience

An opportunity will be provided to members of the public to address the MAG RASP Policy Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Chair of the MAG RASP Policy Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard.

3. Minutes of the Meeting of November 18, 2003

4. MAG RASP Update - Future Scenario For Airspace Analysis

Based on the evaluation of the alternatives, Wilbur Smith identified a MAG RASP "Preferred scenario" for airspace analysis. This scenario is a future scenario and subject to change based upon subsequent airspace analysis. The Scenario was conveyed in working paper #6 and discussed at the May 13, 2004 meeting of the MAG RASP Technical Advisory Committee. Based on input received at that meeting, the Scenario and the Working Paper were revised and redistributed to the Technical Advisory Committee. On July 1, 2004 the Technical Advisory Committee recommended that the scenario with some amendments be subjected to a detailed airspace analysis. The

2. For information and discussion.

3. For review and approval of meeting minutes of November 18, 2003.

4. For information, discussion and recommendation on a future scenario for detailed airspace analysis.

amendments are summarized in the memo transmitting the Working Paper. In addition a table showing the evolution of the recommendations from Working Paper #4 through the second draft of Working Paper #6 is also attached. The Policy Committee will be requested to consider the MAG RASP TAC recommendation of a future scenario for airspace analysis. Please see Attachment One.

5. Airspace Analysis of Future Scenario

The airspace analysis of the future scenario is designed to insure that recommended projects do not impair the mission of Luke Air Force Base or the operation of Phoenix Sky Harbor International Airport; and that there is adequate airspace to support the proposed improvements. This will probably involve some form of airspace simulation that will evaluate congestion and potential airspace conflicts resulting from the future scenario and identify potential airspace changes to address any issues that arise. Options for undertaking such an airspace analysis and the associated cost will be discussed with members of the Policy Committee including the issue of potential funding and the development of an RFP.

6. Public Meeting to Solicit Input on Preferred Scenario

In addition to receiving input from the MAG RASP Technical Advisory Committee and the MAG RASP Policy Committee on the preferred airport scenario for future analysis, it will be important to solicit input from the public. The holding of a public meeting to solicit such input will be discussed.

5. For information, discussion and possible action.

6. For information, discussion and possible action.

MINUTES OF THE  
MAG REGIONAL AVIATION SYSTEM PLAN POLICY COMMITTEE

Maricopa Association of Governments (MAG) Office  
302 North 1<sup>st</sup> Avenue, Ste. 200, Saguaro Room  
Phoenix, Arizona

November 18, 2003

MEMBERS IN ATTENDANCE

Mayor Elaine Scruggs, Chair, Glendale  
Mayor Vincent Francia, Cave Creek  
\*Councilmember Bob Caccamo, Chandler  
Councilmember Dave Crozier, Gilbert  
Councilmember Ken Porter  
Mayor Keno Hawker, Mesa  
Councilmember Robert Littlefield, Scottsdale  
\*Councilmember Thomas Allen, Surprise  
Vice Mayor Barb Carter for Mayor Neil  
Giuliano, Tempe

Councilmember David Lane, Wickenburg  
\*Supervisor Fulton Brock, Maricopa County  
Councilmember Claude Mattox, City of  
Phoenix  
Ray Boucher, Arizona Department of  
Transportation  
Richard Dykas, Federal Aviation  
Administration  
\*Lt. Colonel Kris Greene, Arizona Air National  
Guard  
Colonel Peter Costello, Luke AFB

OTHERS IN ATTENDANCE

Greg Chenoweth, Chandler  
Brian Townsend, Gilbert  
Wayne Balmer, Mesa  
Mark Meyers, Mesa  
Kelly McMullen, McDOT  
Steve Grubbs, Phoenix  
Christopher Hacker, Phoenix  
David Krietor, Phoenix  
Debbie Klein, Phoenix  
Marsha Wallace, Phoenix  
Sharon Wood, Phoenix  
Scott Gray, Scottsdale  
Jennifer Lewis, Scottsdale  
Miryam Gutier, Glendale  
Steve Methvin, Glendale

Mark Ripley, Glendale  
Oddvar Tveit, Tempe  
Amber Wakeman, Tempe  
Pam Keidel, Wilbur Smith  
Scott LeCount, Wilbur Smith  
Lynn Kusy, Williams Gateway Airport  
Rusty Gant, State Transportation Board  
Evelyn Hallman, Citizen  
Barbara Sherman, Citizen  
Millie Swick, Citizen  
Amy Duffy, Consultant  
George Sullivan, Consultant  
Randal Weidemann, Consultant  
Gerald Pennington, Federal Aviation  
Administration  
Tom Remes, MAG  
Harry Wolfe, MAG

1. Call to Order

The meeting was called to order at 11:20 a.m. by Chairman Elaine Scruggs.

2. Review of Minutes of December 10, 2002

Chairman Elaine Scruggs asked if there were any comments on the minutes. Harry Wolfe noted that he had misspelled the name of the Luke Air Force Base (AFB) representative at the meeting; and that it should have been spelled Colonel "Dennis Rea."

It was moved by Vice Mayor Barbara Carter of Tempe, seconded by Councilmember Ken Porter of Goodyear and unanimously recommended to approve the meeting minutes as amended.

3. Overview and Status Report on the MAG RASP Update

Harry Wolfe provided a brief overview and status report on the MAG RASP Update. He provided an explanation of the objectives and perspective of a regional system plan, noting it focused on major projects that have significant region-wide impacts. He also emphasized that while the RASP sought to accommodate future demand for air transportation services, one of its basic assumptions was that proposed development should not impair the mission of Luke AFB.

Mayor Scruggs asked Harry Wolfe to identify the criteria that were used to evaluate the alternatives in the MAG RASP. Mr. Wolfe responded that the criteria included noise, air quality, airspace, impact on mission of Luke AFB, delay, cost, and user convenience.

Mayor Scruggs said it was her recollection that some time ago, the Technical Committee had been given a stronger role in the review of the RASP. Harry Wolfe responded that although the Technical Committee had been disbanded as a part of the MAG committee streamlining process in 1997, that he continued to meet with technical staff to solicit input. He concurred with Mayor Scruggs' reference to the increased role of technical staff in the process. He noted that after the forecast report was prepared, the Policy Committee sent it back to technical staff for review. He explained that subsequently, each working paper was sent to the technical staff for review, and then their comments were sent to the MAG RASP Policy Committee for consideration.

4. Review of Working Paper #5, Evaluation of Alternatives

Pam Keidel of Wilbur Smith gave a presentation on the evaluation of Working Paper #5 explaining the process that was used in evaluating the alternatives.

Colonel Peter Costello asked if the evaluation criteria were weighted. Mayor Keno Hawker said that it was difficult to weight the evaluation factors. He said that he liked the broad brush approach. Vice Mayor Carter said she agreed with Mayor Hawker's comments. She added that she was concerned about looking at each airport separately, since there is only so much airspace in the region.

Councilmember Robert Littlefield provided the perspective of someone who was heavily involved in airport environmental issues. He said that some issues do not lend themselves to weighting factors and some issues are political in nature.

Mayor Scruggs pointed out: the omission of reference to Luke Auxiliary Field #1 and Gila Bend

Auxiliary Field from the report; and the omission of Luke traffic patterns.

Pam Keidel responded that the two fields had not been referenced in earlier reports and that no comments had been received from Luke AFB. She said that she would be willing to add the airports to the Working Paper and understood that the facilities are part of the Luke AFB system. Ms. Keidel added that the Luke AFB traffic patterns had not been included in the report because they had not been provided. However, she noted that the traffic patterns would be added.

Pam Keidel added that the airspace analysis had been forwarded to Luke AFB staff prior to it being released as a part of the Working Paper; but that few comments were provided at that time.

Mayor Hawker asked if Luke AFB F-16's fly with live ordnance? Colonel Costello said that they do fly with live ordinance.

Mayor Hawker asked if the F-16's fly over residential areas while carrying the live ordnance? Colonel Costello said that F-16s do not fly over residential areas with live ordnance. He said that flight paths had been modified to avoid residential areas.

Mayor Keno asked how development that is occurring on the West side is impacting Luke AFB. Colonel Costello responded that there are committees working with Luke AFB on a southern departure corridor.

Terry Hansen said that in examining airspace, you need to look beyond the region. He pointed out that what happens throughout the state as well as with Los Angeles and Albuquerque centers impacts airspace in the region. He also emphasized the importance of the Jackal/Outlaw MOAs and preserving them for use by Luke AFB.

Pam Keidel indicated that there were some issues that had been raised that were outside the scope of the consultant's contract. She said that she could respond to the comments raised that were within the scope.

Vice Mayor Carter asked to look at Exhibit 5.1 on page 5-10 related to a fourth runway at Phoenix-SkyHarbor. She stated that she did not think that an alternative with this project had been approved. Pam Keidel pointed out that the projects included in the alternatives were included in Working Paper #4, Alternatives, which was approved at the December 10, 2002 MAG RASP Policy Committee meeting.

Vice Mayor Carter also stated that she objected to using a single page to respond to all the comments that had been offered on the RASP. Pam Keidel pointed out that many of the comments did not require that the consultant take any action. She said the purpose of the summary was to identify the major items that they would be pursuing as a result of the comments.

Councilmember Littlefield stated that there are some issues that the RASP may not have taken into account, but that these might be outside the scope of the effort. He said that the RASP does not take into account some externalities. He said that the charter of the MAG RASP Policy Committee was to look at solutions for meeting future capacity needs.

Councilmember Littlefield stated that noise goes beyond the noise contours. He indicated that in Scottsdale, most of the complaints come from people who live far outside the noise contours.

Mayor Vincent Francia said that he sympathized with Councilmember Littlefield's plight.

Dick Dykas of the FAA pointed out that millions of dollars and years will be spent on doing a detailed airspace analysis in the Los Angeles area, but the study would not come up with any magic solutions to the airspace challenges confronting us.

Mr. Dykas said that while the MAG RASP Update will influence the future airport system, projects would be subjected to greater scrutiny and more detailed analysis when they were ready to be formally considered.

Pam Keidel pointed out that no study can tell you the capacity of a volume of airspace. It can provide insight on potential delay, but not a specific number of airplanes that can be handled.

Dick Dykas said that he agreed with Ms. Keidel's comments.

Chairman Scruggs noted that the RASP budget had been increased by an additional \$77,000 to consider the airspace impacts of projects on Luke AFB, but that there was still a lot of airspace work that needed to be done.

Pam Keidel explained that Wilbur Smith had used those funds to conduct an analysis of the airspace impact of each project in the RASP on Luke AFB and on Sky Harbor. She said that it did not, however, cover performing detailed modeling which was beyond the scope of the study. She said that such analysis could be conducted, once a potential future scenario was identified. Ms. Keidel said that the future scenario would likely be a hybrid of the alternatives evaluated.

Mayor Vincent Francia said that growth in the region is a political reality pointing out that there would be another three million people here in the next 20 years.

Councilmember Littlefield said that you can't expect the FAA to make commitments on projects in advance of their submission to the FAA for funding approval.

Vice Mayor Barbara Carter said that she was concerned that lengthy staff comments had been watered down in the response. She said that she would like to see technical staff get back together and bring back a recommendation. She said the report was too indepth to fully comprehend its implications.

Mayor Hawker urged the committee to move the effort forward. He said that nothing would be gained through delay. It was moved by Mayor Hawker, and seconded by Claude Mattox to direct the consultant to use the evaluation conducted in Working Paper #5 and proceed with developing a recommended future scenario in Working Paper #6; to defer the scheduled December 4, 2003 public meeting until after the future scenario was developed; and to have the Technical staff take a stronger role in reviewing and providing a recommendation on Working Paper #6 to the Policy Committee before the Committee meets again. The motion carried unanimously with two abstentions.

Chairman Scruggs indicated that she had to leave the meeting for another appointment and asked Mayor Hawker to assume responsibility as the Acting Chairman.

5. MAG RASP Public Meeting

Harry Wolfe reported that based on the motion passed, the December 4, 2003 MAG RASP Public Meeting - would be cancelled and rescheduled sometime after the consultant has developed its recommendation of a scenario.

6. Efforts to Protect and Preserve the Mission of Luke AFB

Colonel Peter Costello reported on MILCON appropriations. These are federal funds that were provided last year and again this year to assist in efforts to acquire land to support the mission of Luke AFB. Specifically, last year's allocation was to acquire land around the Munitions Storage Area (MSA) and the residual to be applied to the Southern Departure Corridor. Currently, the U.S. Army Corps of Engineers is evaluating the Luke AFB mission requirement and land appraisal.

Harry Wolfe reported that the Arizona Department of Commerce is pursuing a study that contains numerous policy recommendations for achieving compatibility between Luke AFB and the Base. He also mentioned that a military committee was working on initiatives to help Luke, and that individual local jurisdictions were pursuing actions to achieve compatibility with Base operations. Colonel Costello also noted that the Department of Commerce is working on a land use study around Luke Auxiliary Field #1 and another study around the Gila Bend Auxiliary Field. He said it was important to protect the viability of both Luke Auxiliary Field #1 and of the Gila Bend Auxiliary Field. Harry Wolfe asked if there were some kind of understanding with the Town of Gila Bend regarding the preservation of the Gila Bend Auxiliary Range. Colonel Costello said that the Base and Gila Bend had entered into an agreement containing language which was designed to protect Luke AFB.

7. Report on Other Aviation Matters that Have an Impact on the Region

Harry Wolfe noted that the FAA would probably be pursuing some airspace initiatives in the future, like Northwest 2000. He asked Gerald Pennington, the FAA official from the Phoenix Terminal Radar Approach Control (TRACON), for an update.

Mr. Pennington stated that there were no firm plans at this time to initiate an airspace restructuring plan in the south part of the region, but that the FAA is always examining ways to enhance the efficiency of the airspace system. He noted that the Air Traffic Controls Union is pushing for consolidation of Terminal Radar Approach Controls in Arizona in a manner similar to what has been done in Southern California. Mr. Pennington commended Randall Wiedeman, the MAG RASP airspace consultant, for doing an excellent job in analyzing the airspace situation in the region. He mentioned that Mr. Wiedemann had spent many hours analyzing the airspace interactions among airports and meeting with airspace officials.



8. Call to the Audience

There were no requests from the audience to speak. However, prior to the close of the meeting, Councilmember David Lane indicated that the town had planned a new airport in the next 25 years and that the current airport will not serve all of the town's needs.

The meeting adjourned at 1:10 p.m.

September 20, 2004

**ATTACHMENT ONE**

TO: Members of the MAG RASP Policy Committee

FROM: Harry P. Wolfe, Senior Project Manager

SUBJECT: TRANSMITTAL OF DRAFT TWO OF WORKING PAPER #6, PREFERRED SCENARIO

On July 1, 2004 the MAG RASP Technical Advisory Committee met and recommended by a vote of 13-1 a Preferred Aviation Scenario to meet future demand for a detailed airspace analysis. The recommended Future Scenario is described in the attached Working Paper #6 with some revisions recommended by the Technical Advisory Committee. An airspace analysis needs to be conducted to ensure that the recommended projects do not impair the mission of Luke Air Force base or constrain the operation of Phoenix Sky Harbor International Airport prior to developing a recommended Plan. The MAG RASP Policy Committee is requested to consider approval of the MAG RASP Future Aviation Scenario for more detailed airspace analysis.

**BACKGROUND**

The MAG RASP Update was initiated in 2001. Its goal is to meet the future air transportation needs in the region in a safe and efficient manner to 2025. To date, the consultant has prepared and the Policy Committee has reviewed and accepted five working papers as follows:

1. Working Paper #1 Inventory
2. Working Paper #2 Forecasts
3. Working Paper #3 Demand/Capacity Analysis
4. Working Paper #4 Alternatives
5. Working Paper #5 Evaluation of Alternatives

Based on the evaluation of the alternatives and input from the MAG RASP Policy Committee, Wilbur Smith Associates developed a first draft Working Paper #6, which conveyed the "Preferred Scenario" for meeting future demand. This scenario was distributed to members of the MAG RASP Technical Advisory Committee and discussed at a meeting on May 13, 2004.

At the meeting comments were provided and the consultant was asked to make revisions to the working paper in light of the input received. The consultant has reviewed all the comments received and incorporated revisions into a second draft two of Working Paper #6.

The primary purpose of conducting a regional or metropolitan aviation system plan, according to current Federal Aviation Administration (FAA) guidelines, is to provide a representation of the “aviation facilities required to meet the immediate and future air transportation needs of the metropolitan area.”<sup>1</sup> These regional aviation plans provide a basis for “definitive and detailed individual airport planning.”

At the outset of the Regional Aviation System Plan Update (MAG RASP), the goals and objectives of the plan were established. The goals include:

1. Meet the long-term air transportation needs of the Region. Air transportation needs include commercial service and general aviation.
2. Capture the air transportation and economic benefits that aviation has to offer, while minimizing any adverse impacts related to congestion, the environment, and airspace.
3. Develop a safe and efficient airport system and maximize the use of the existing system.

Four specific objectives to be achieved by the RASP were also identified. These include:

1. To assess the regional airport system capacity to the year 2025, and identify airport and aviation system capacity deficiencies through the planning period, with special emphasis on commercial aviation demand/capacity issues.
2. To make recommendations for orderly and timely airport facility development which preserves and improves the system of airports to meet present and future air transportation needs of the Region.
3. To assure compatibility of MAG Regional Airport System Planning efforts with FAA and with other regional transportation planning efforts.
4. Provide a basis for coordinating and understanding airport plans with local, regional and state level planning efforts and to provide a basis for public information and aviation support to enhance preservation and promotion of existing key airport facilities.

Through analysis conducted in the five previous working papers, the RASP has provided an overview of the existing system, projected demand for aviation, determined future needs, and evaluated alternatives to meet future needs. This sketch working paper presents the findings and conclusions of the analysis conducted to date, including a preferred future scenario for consideration for the MAG RASP Update. This preferred scenario identifies those projects that have the potential to help the system meet its goals, but will require more detailed airspace review and analysis, including the potential impact to Luke Air Force Base’s mission, in order to determine its implementation feasibility. The purpose of identifying a preferred scenario is to provide information necessary to conduct an airspace review, including potential projects for the airports in the Region so as to provide a means for evaluating the projects together as opposed to separate airspace analysis for each individual project.

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<sup>1</sup> FAA Advisory Circular 150/5070-5, “Planning the Metropolitan Airport System”

## FINDINGS AND CONCLUSIONS

The most significant finding of the analysis conducted in the RASP is a future aviation capacity deficiency for the entire Region. This deficiency is primarily airside, but the analysis also identified a need for storage facilities for the projected increase in based aircraft in the Phoenix metropolitan area, as well as the need for improved ground access, especially to Phoenix-Sky Harbor International, and airspace capacity. Airside capacity establishes the ability of the existing airfield facilities (runway and taxiway) to accommodate projected aviation activity demand. For purposes of this study, airport capacity was generally measured in terms of annual service volume (ASV), with a limited review of hourly capacity only at Phoenix-Sky Harbor International.

Ten of the MAG system airports are projected to exceed the FAA's planning threshold for capacity enhancements by 2025. Eight of these 10 airports are projected to exceed the FAA's action threshold for additional facilities to be in place to accommodate projected demand.

In addition to capacity, another deficiency that was highlighted was the need for additional instrument approach capabilities in the Phoenix metropolitan area. The volume of aviation activity in the MAG Region, including the high level of training activity, indicates that instrument approach capabilities are vital to the Region's air transportation system. The analysis identified up to nine precision approaches and three nonprecision approaches be developed to serve the MAG Regional aviation system. The issue with adding approach capabilities is primarily the availability of airspace and the ability of the existing airspace to accommodate this type of activity. Accommodating increased and more precise instrument approaches was also noted to be of concern to Luke Air Force Base and its ability to maintain the current level of airspace required for the Base to fulfill its mission. The analysis contained in the RASP only highlights some of the airspace issues but does not include a detailed airspace modeling component, nor does it measure the capacity of the Region's airspace.

With the major deficiencies identified, the next step was to determine alternative means for improving the system and to select evaluation criteria. Four alternatives were selected for analysis including:

- ❑ Status Quo
- ❑ Improved Technology
- ❑ Maximized Development of Existing System
- ❑ New Airport Development (general aviation and/or commercial service)

The Status Quo serves as the baseline against which other alternatives are compared in terms of the impact to the various criteria from development proposed as part of the four alternatives. While four separate alternatives were analyzed in this study, some of these alternatives can be viewed as more additive than completely separate alternatives. For example, all projects included in the Status Quo alternative are also part of the three remaining alternatives. It is also anticipated that the Improved Technology alternative would be implemented as part of the Maximized Airport Development and New Airport Development alternatives, with the purpose of the Improved Technology alternative being to evaluate whether these enhancements could alone resolve the Region's identified capacity shortfall. The Maximized Airport Development and New Airport Development alternatives are more stand-alone options evaluated to determine the ability of the existing Regional system to be enhanced to address the capacity deficiencies.

Ten criteria were selected for evaluation to enable the comparison of the four alternatives. These criteria include:

- ❑ Environmental (noise and air quality)
- ❑ Costs/Economic Benefits
- ❑ Delay
- ❑ User convenience
- ❑ Access improvements
- ❑ Airspace compatibility
- ❑ Impact on Luke AFB
- ❑ Ease of implementation
- ❑ Title VI
- ❑ FAA/ADOT design compliance

While each of these criterion are important to the determination of the ability of the alternatives to be implemented, airspace compatibility, including the impact to Luke Air Force Base, was determined to be one of the most significant issues. Protection of Luke's mission through airspace preservation, land use compatibility, and consideration of its needs was identified as a high priority evaluation criterion.

Each of the four alternatives was evaluated using these criteria to an airport-specific level of detail. For purposes of the alternatives evaluation, specific sites were located for new projects at existing airports, as well as locations for proposed new airports to enable a similar level of analysis in evaluating the alternatives. A summary of the general findings related to the ability of each alternative to meet the three goals of the study is provided below.

### **Ability to Meet Study's Goals**

The purpose of any regional or metropolitan aviation system plan is to determine what the aviation needs of the area are and to develop a plan to meet the needs. The MAG RASP Update defined long-term as the horizon year 2025, more than a 20-year planning period. Over the past 20 years, the Phoenix metropolitan area has experienced tremendous growth in population, requiring proportional growth in its aviation system. While growth is projected to decline in terms of percentage rates, significant population growth is still projected to continue through 2025. In 2000, the population of Maricopa County was approximately 3.1 million persons. By 2025, the population is projected to reach nearly 5.7 million persons. Similarly, growth in the demand for the aviation system is also projected to continue. The RASP's analysis evaluated the ability of four alternatives to meet the long-term air transportation needs.

### ***Status Quo***

The Status Quo alternative serves as the RASP's "do-nothing" or baseline alternative. This alternative scenario represents construction of only those development projects identified in the Arizona Department of Transportation Aeronautics Division's (ADOT's) FY 2003-2007 Capital Improvement Program (CIP). No additional facility development is identified in this alternative scenario, other than that required to maintain all existing and currently programmed facilities. Of these projects, the runway extension at Glendale has been completed during the course of this study.

The Status Quo alternative does the least of the four alternatives to improve the Region's capacity deficiency, with no additional capacity enhancements included in this alternative. Of the 10 criteria evaluated in the alternatives evaluation, the Status Quo will have the most significant negative impact on delay, which results in costs to users including airlines, general aviation businesses, passengers, and pilots. The delay projected for 2025 based on previous analyses is estimated to cost between \$643 million (Scenario 1-low growth at Phoenix-Sky Harbor International) and \$1.5 billion (Scenario 2-high growth at Phoenix-Sky Harbor International). In addition to calculated costs, there are additional costs

that cannot easily be quantified, but will impact the Region including potential loss of flight training, reduced airline service, and business opportunities.

The negative impact to delay is somewhat offset by the cost of the Status Quo alternative, which is considered to be \$0, as the projects included in this alternative are considered to be completed as part of this alternative (they are already programmed as part of the FY 2003-2007 ADOT CIP). The actual cost of the projects included in the alternative is \$919 million for the period FY 2003-2007. Without additional spending on projects, however, the economic benefit of the Region's aviation system will be limited, when typically the economic benefit of airports continues to grow each year with spending on construction projects in addition to the traditional spending that occurs at an airport.

Analysis of other criteria such as noise, air quality, user convenience, access improvements, airspace compatibility, ease of implementation, and Title VI impacts showed that the Status Quo alternative has the least negative affect on the Region of the four alternatives evaluated, although the impacts of some of these are not significantly less than the impact of other action-oriented alternatives. The study's analysis assumed that the same level of demand would be generated and accommodated under all four alternatives such that the impacts that result would be due to constructing new facilities that are needed to accommodate demand.

The Status Quo alternative does not meet the long-term air transportation needs of the Region. The air transportation needs will be impacted by the inability of the Regional system to accommodate the projected level of demand without significant delay to users. The rippling effect of delay including costs to users and potential loss of economic benefits and other less-quantifiable benefits indicate that some action-oriented alternative is necessary for the Region to serve the projected levels of aviation demand for 2025.

Without meeting the long-term needs, the Status Quo alternative does not allow the Region to capture additional economic benefits that aviation has to offer. Economic benefits are likely to continue to grow as the system accommodates more activity, but as the delay increases, these benefits will be stymied and costs will be incurred to users of the system. While the existing system is safe, safety is not improved by limiting capacity, including a lack of precision instrument capabilities that allow users more defined approach paths to airports. The existing system would be maximized as part of the Status Quo alternative to the point of over-saturation as new facilities are not constructed to accommodate the projected increases in demand. By limiting the development of new facilities, demand will not necessarily be reduced, although that potential exists, but will instead be forced to incur the costs of delay including more time spent in the air trying to land and on the ground waiting to take off. These impacts relate to congestion, the environment, and airspace, which are negatively impacted through the Status Quo alternative.

### ***Improved Technology***

The Improved Technology alternative was developed to determine if the anticipated technology enhancements underway or in the planning stages would have the ability to significantly increase capacity such that construction-related projects would not be needed to provide for the projected level of aviation activity in the Region in 2025. The FAA has been continuously evaluating new technologies related to airspace and flight. The FAA's Operational Evolution Plan, as well as the Airspace Capacity Enhancement Plan, provides discussion of initiatives that are proposed to address increasing airspace and airport capacity. Potential improvements and methodologies include:

- ❑ Flight management systems (FMS) transition to existing approaches – FMS approaches
- ❑ Independent parallel approaches using precision runway monitor (PRM) – including closely spaced parallel runways
- ❑ Independent parallel approaches using final monitor aid (FMA)
- ❑ Improved operations on parallel runways separated by less than 2,500 feet
- ❑ Simultaneous offset instrument approach – for parallel runways spaced 750 to 3,000 feet apart
- ❑ Along track separation – reduced diagonal separation of aircraft
- ❑ Automated dependent surveillance (ADS-B)/cockpit display of traffic information (CDTI) – allows for greater awareness of traffic by pilots
- ❑ Global Positioning System (GPS) augmentations – wide area augmentation system (WAAS) and local area augmentation system (LAAS)
- ❑ Area navigation (RNAV and LNAV) approaches – don't require ground-based NAVAIDs

In addition, the FAA plans to implement two ASR-11s to enhance radar coverage in the Region. These new ASR-11s should enhance the Region's airspace and are included in this alternative.

The analysis has shown that, overall, it is anticipated that implementation of the new technologies has the potential to increase capacity by approximately 4 percent for the entire Region.<sup>2</sup> The enhanced capacity is likely to be realized at the larger airports such as Phoenix-Sky Harbor International, but the impact could be realized at other airports depending upon the final airspace requirements set by the FAA once the technologies are in place and their implementation by air traffic control. Enhancements such as curved precision approaches and radar coverage have the potential to impact many airports, including potentially improving the airspace compatibility in the Region with airspace requirements related to approach procedures changing. The impact of these and other planned improvements to the national airspace system can be evaluated in terms of the projected impact on capacity and delay, but do not easily lend to evaluation of their impact on other criteria such as noise and airspace compatibility.

It is likely that the Improved Technology alternative will be implemented as a result of the FAA's responsibility for airspace, including enhancements that will improve airspace capacity and compatibility. The RASP's analysis has indicated, however, that even with implementation of new and improved technologies, that capacity will still be insufficient to accommodate projected aviation demand for the Phoenix metropolitan Region through 2025. The Improved Technology alternative does provide for maximizing the existing system by increasing the capacity in the Region without building additional facilities, but does not sufficiently increase the capacity to allow for significantly reduced delay. Therefore, construction-related alternatives are needed in addition to implementing the Improved Technology alternative if the study's goals of meeting long-range transportation needs and capturing additional economic benefits are to be met. The congestion, environmental, and airspace impacts of the Improved Technology alternative are not known. The impact of these and other planned improvements to the national airspace system can be evaluated in terms of the projected impact on capacity and delay, but do not easily lend to evaluation of their impact on other criteria such as noise and airspace compatibility.

### ***Maximized Airport Development***

The Maximized Airport Development alternative examined the ability of each airport to implement capacity enhancements, as well as other projects, to achieve a Region-wide increase in overall capacity using the existing airports. Under the Maximized Airport Development alternative, new or reconstructed runways were proposed at six airports, longer runways were proposed at four airports, precision

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<sup>2</sup> In addition to these technologies, it has been noted that improvements to en-route airspace could also enhance capacity in the Region. No accurate data source has been identified which quantifies the capacity enhancement from changes to en-route traffic.

approaches were proposed at nine additional airports, nonprecision approaches were proposed at four additional airports, and additional commercial terminal facilities were proposed at three airports. Analysis of the impacts of these proposed developments was conducted on an airport-specific level, by criterion. This type of analysis allowed for a detailed examination of each proposed project to determine which projects should be carried forward for recommendation based on its anticipated impacts to the 10 criteria.

If all of the projects proposed as part of the Maximized Airport Development alternative were implemented, the Region's capacity would be enhanced in 2025 by 17 to 20 percent. In addition, other needs, specifically storage facilities and approach capabilities, would also be improved allowing the system to meet many of the long-term air transportation needs. While implementation of all of the projects included in the alternative would improve the capacity and help to meet the air transportation needs of the Region, other impacts were also considered that indicate that some of the projects have potential negative impacts that may outweigh the positive returns that could be achieved.

It is recognized that the airports in the MAG Region, while operated independently by different governing bodies and located in different locales, do operate in the same environment to serve the entire Region's aviation needs. Whether the needs are commercial air travel, corporate general aviation, or recreational, each airport serves a distinct role in the Regional system and contributes to the ability of the overall network to meet the long-term air transportation needs. With Phoenix-Sky Harbor International, Williams Gateway, and Scottsdale serving commercial passengers, and the remaining airports primarily serving general aviation activity ranging from corporate to recreational, each airport's role must be considered independently. Although they serve different functions, they do comprise an interlocking system.

For the commercial needs, the study's analysis has shown that, under the Maximized Airport Development alternative, commercial airline service is likely to continue to be most prevalent at Phoenix-Sky Harbor International, supplemented by Williams Gateway and Scottsdale, to a lesser extent. Development of a fourth runway at Phoenix-Sky Harbor International was evaluated in the Maximized Airport Development alternative, as was development of a new east-west runway at Williams Gateway. The fourth runway at Phoenix-Sky Harbor International was noted to have significant impacts, including requiring relocation of a major business (Allied Signal/Honeywell) on the airport. Other significant impacts included noise, cost, airspace compatibility and ease of implementation. Even with this anticipated level of impact related to development of a fourth runway, this study has concluded that this project should be included for further airspace evaluation. It is important to recognize the role that Phoenix-Sky Harbor International plays in the existing system serving the majority of commercial airline needs. With development of the West Terminal Area, as included in the Status Quo alternative due to its programming in the FY 2003-2007 ADOT CIP, and the People Mover system, the ability of passengers to reach the airport will be increased. Development of a fourth runway would complement this growth and should be studied further to determine the range of potential impacts that may result.

Development of an east-west runway at Williams Gateway presents another potential opportunity for increase in capacity in the Region, especially as it relates to commercial service activity. The General Motors facility relocation may present an opportunity for this runway's development. While development of an east-west runway would have impacts to noise and cost, it is anticipated that airspace compatibility would not be as significant for Phoenix-Sky Harbor International since a new east-west runway at Williams Gateway would actually put traffic flows in line with existing Phoenix-Sky Harbor activity. A negative impact could result to Luke for Special Use Airspace during bad weather conditions. Ease of implementation was also noted to be a potential issue due to the significant efforts required to construct a new runway and additional terminal facilities at commercial airports across the U.S. Concerns regarding noise and the environment have been noted, as development surrounding Williams Gateway continues in



communities such as Gilbert and Mesa. While an east-west runway could provide additional capacity to the Region, it was noted that a capacity increase could possibly be attained through development of curved instrument approaches to the existing runways, therefore limiting the potential impact with Phoenix-Sky Harbor's air traffic.

For increasing capacity and improving the Region's accommodation of general aviation activity to meet the long-term air transportation needs, some of the most significant projects included in the Maximized Airport Development alternative included development of new runways, restoration of runways, runway extensions, and implementation of precision approaches. New runways at Phoenix-Deer Valley and Phoenix-Goodyear were evaluated as part of the Maximized Airport Development alternative. The new runway at Phoenix-Deer Valley was noted to have impacts to noise, cost, airspace compatibility, and ease of implementation. Significant increases in the number of acres that would be impacted by noise, including incompatible land uses, and the fact that the runway has not been included in previous planning efforts for the airport were noted to impact the ability of the project to be implemented. The parallel runway at Phoenix-Goodyear was noted to have a greater potential for implementation as it has been included in previous planning efforts, and would have a significantly lower cost. The most significant issue with a parallel runway at Phoenix-Goodyear is a potential moderate to severe impact on Luke's airspace. If the runway did not have a precision approach, the impact would not be as severe.

Restoration or paving of runways at Memorial and Pleasant Valley were also evaluated as part of the RASP's Maximized Airport Development alternative. The most significant issue with restoration of a runway at Memorial is ease of implementation since restoration has been pursued but not completed in the past. Recently additional interest has been noted for restoration, therefore the potential for this project may exist. However, restoration does not indicate that the runway facilities be located in the same orientation as the existing runways. It may be possible to develop a runway at Memorial or in the vicinity of the existing Memorial Airport that would limit some of the potential impacts that have been identified. While paving of a runway at Pleasant Valley was analyzed as part of the RASP's analysis, subsequent to the development of the alternatives the Arizona State Land Department, the landowner of the property on which Pleasant Valley is located, indicated that they are not interested in development of new facilities at the airport site. Therefore, this project will not be included in the preferred scenario, but restoration of a runway or development of a new runway at Memorial is included.

Runway extensions in the Maximized Airport Development alternative were analyzed for Buckeye Municipal, Chandler Municipal, and Phoenix-Sky Harbor International. For Buckeye, the longer runway is not anticipated to result in negative impacts by itself, but combination of a longer runway and a more precise approach were noted to have the potential to impact Luke's activities as more sophisticated aircraft would likely use the airport and create compatibility issues. This same issue was noted for a precision approach at Chandler, which could also impact airspace compatibility with Phoenix-Sky Harbor International if it were to Runway 22L. It has been noted that a precision approach to Runway 4R, especially if it were a curved precision approach, may not have the same compatibility issues. A runway extension at Phoenix-Sky Harbor was not noted, by itself, to have significant impacts although a detailed study would be required to determine the extent of the impacts resulting from extending Runway 7R/25L.

Development of more precise approaches was recommended for many of the Region's airports including three nonprecision approaches and nine precision approaches as part of the Maximized Airport Development alternative. Nonprecision approaches were recommended at the smaller airports, while precision approaches were recommended at the designated reliever and commercial airports in the Region. Provision of precise approaches is highly recommended for reliever and commercial airports for those airports to adequately fulfill their roles. While both Phoenix-Sky Harbor International and Williams Gateway have existing precision approaches, none of the other airports in the Region, including the reliever airports, have this capability. The most significant issue related to development of more precise

approaches is airspace compatibility, which was analyzed as it relates to potential impacts to Phoenix-Sky Harbor International and Luke Air Force Base. Impacts were identified for all of the approach improvements, with the least significant impacts associated with Mesa Falcon Field, Scottsdale, and Williams Gateway. If curved precision approaches, as proposed as part of the Improved Technology alternative, were developed from the east at Phoenix-Deer Valley, from the east at Phoenix-Goodyear, and from the southwest at Chandler, the impacts would not be as significant, but would still exist related to Phoenix-Sky Harbor International and Luke. Further analysis of the potential impact of curved precision approach at Chandler Municipal might also reveal the enhanced feasibility of these improved approaches. It is important to note that while more precise approaches have been recommended, that with improvements in technology, it is assumed that curved approaches may present less impact to the Region's airspace and will be implemented, as possible.

Terminal facility development to serve commercial passengers was recommended as part of the Maximized Airport Development alternative for Phoenix-Sky Harbor International, Scottsdale, and Williams Gateway. It is important to note that development of the West Terminal Area at Phoenix-Sky Harbor International is included as part of the Status Quo alternative since it has been included in the FY 2003-2007 ADOT CIP. Depending on the final configuration of this area, additional terminal facilities at Phoenix-Sky Harbor International may or may not be warranted to meet demand projected as part of the RASP.

The following projects were noted to have the most potential for development as part of the Maximized Airport Development alternative:

- ❑ Buckeye Municipal – runway extension
- ❑ Chandler Municipal – runway extension, precision approach
- ❑ Glendale Municipal – taxiway extension
- ❑ Memorial – airport facility restoration
- ❑ Mesa Falcon Field – precision approach
- ❑ Phoenix-Deer Valley – parallel runway and precision approach from the east
- ❑ Phoenix-Goodyear – parallel runway and precision approach from the east
- ❑ Phoenix-Sky Harbor International – 4<sup>th</sup> runway, runway extension, precision approaches (4<sup>th</sup> runway and 25R), additional terminal building space
- ❑ Scottsdale – precision approach, additional terminal building space
- ❑ Williams Gateway – additional terminal building space

These projects would enhance the Region's ability to meet long-term air transportation needs by improving the capacity of the airport system and providing additional facilities and approaches. While improving the capacity of the system, even with these enhancements, further capacity increases could be needed to meet the projected level of demand for 2025.

In addition to enhancing the Region's ability to meet long-term air transportation needs, implementation of these projects would allow the Region to capture additional economic benefits that aviation has to offer. Economic benefits result not only from construction-related impacts from building new runways and storage facilities, but also result from the increased activity that is accommodated at the airports. Increased usage by transient operators, especially those conducting business in the Region, increases the economic benefits as these operators spend money in the Regional economy. This spending ripples through the Region, resulting in increased employment at the airports and beyond including retail, food and beverage, and lodging. With Arizona's high level of tourist activity, accommodation of aviation demand is important to growth in this industry that is promoted by increasing the ability of tourists to arrive in the Region via air travel.

The Maximized Airport Development alternative also meets the study's goal for maximizing the use of the existing system without development of new airport sites to develop a safe and efficient Regional system. The key to this alternative is to minimize potential adverse impacts related to congestion, the environment and airspace. The projects identified previously in this section consider these impacts, and while requiring additional study and implementation of improved technology such as curved approaches, appear to offer needed enhancements while limiting the most significant impacts. The projects identified in this section as part of the Maximized Airport Development alternative, along with those from the Status Quo and Improved Technology alternatives, would be included in a future detailed airspace analysis.

### ***New Airport Development***

The New Airport Development alternative assumed that the Status Quo and Improved Technology alternatives were implemented, but analyzed the ability of the Region's long-term air transportation needs to be met with development of new airport facilities versus expanding the existing airports as evaluated in the Maximized Airport Development alternative. Four new general aviation airports and three commercial airports were analyzed, with the focus of determining if one new general aviation airport and one of the commercial sites were feasible.

One of the sites evaluated in the New Airport Development alternative was analyzed, but determined to be infeasible (New Peoria). The New Peoria site has been studied extensively, but as noted under the Maximized Airport Development alternative, this site is located on the existing Pleasant Valley site and the Arizona State Land Department has indicated that, as the owner, they would not support development of new facilities on the site.

Of the remaining new sites, three were evaluated for a general aviation airport, two were evaluated for a commercial airport, and further development of Williams Gateway as a supplemental commercial facility was evaluated. Forepaugh is being considered as a potential replacement for Wickenburg Municipal, and the City of Wickenburg has included this airport in its future planning processes. It is important to note, however, that Luke has identified a moderate to severe impact to its mission from development of an improved airport at Forepaugh. Most aircraft departing Forepaugh would have to transit the Gladden/Bagdad MOA, interfering with Luke's ability to use the MOA in its training missions.

The two new general aviation sites, New East Valley and New South Valley both were rated as having moderate potential for development. The New East Valley site is located near the Tonto National Forest and existing Indian communities. The New South Valley site is located in Pinal County and would likely be contained within the Gila River Indian Community. Both sites have the potential for impact to Luke's mission as it relates to low-level training routes and Special Use Airspace. It was noted that a New South Valley site that was located on the west side of Interstate 10 would reduce the potential for impact to Luke. These two new sites appear to have merit for further consideration and feasibility analysis. The two new airports would need a public sponsor identified that is willing to undertake the analysis and development.

In terms of commercial airport sites, the New North Commercial and New RAFA Commercial sites were rated as low probability for development. The New North Commercial site was previously studied on a cursory level and determined to have significant issues related to airspace compatibility with Luke and topographical-limiting constraints. The New RAFA Commercial site, studied in 1993, and identified in the RASP as the Casa Grande site, also has significant issues including lack of a owner/sponsor, requirements for extensive coordination with existing commercial airports (Phoenix-Sky Harbor International and Tucson International), potential airspace constraints depending on its final location, and distance from the primary area the airport is intended to serve, the Phoenix metropolitan Region.

The supplemental Williams Commercial site was identified as having the greatest potential for implementation as the airport has increasingly been serving commercial demand in the metropolitan area. The most significant issue is how to operate a dual-commercial service airport system while the existing airport (Phoenix-Sky Harbor International) continues to have capacity and the airlines are currently operating at the facility. This “new airport” alternative does address the Region’s long-term air transportation needs as it provides an existing site for growth and development of commercial airline activities. It has been noted that development of curved instrument approaches to the existing runways may allow for better air traffic coordination between Williams Gateway and Phoenix-Sky Harbor International and would enhance the capacity of the airport without development of an east-west runway.

Development of a new general aviation airport is recommended for further analysis as this cursory review has shown two potential areas where the impacts are considered moderate. The New East Valley and New South Valley sites present opportunities where the Region’s capacity could be increased through development of new runway facilities at either site. This would help to fulfill the study’s goal of meeting the long-term air transportation needs, however the extent of the impact to congestion, the environment, and airspace are not sufficiently detailed.

The analysis has shown, both in the Maximized Airport Development alternative and the New Airport Development alternative that a supplemental Williams Gateway commercial airport has significant potential to address several of this study’s goals. This New Airport Development alternative for commercial activity appears to have the highest potential for implementation.

### **Summary of Preferred Scenario**

Evaluation of the four alternatives in the RASP indicates that all or part of the four alternatives is preferred in order for the Regional system to meet its goals. Therefore, the study’s preferred scenario for future consideration is a hybrid, comprised of various elements from the four alternatives that appear to meet the study’s goals but also were not identified as having significant negative impacts. The study’s preferred scenario can be summarized as follows:

- ❑ The Status Quo alternative, while serving as a baseline for comparison, also included several projects that are underway or have been completed (Glendale runway extension). The West Terminal Area and People Mover at Phoenix-Sky Harbor International have also been included based on their inclusion in the FY 2003-2007 ADOT CIP. These projects are included in the preferred scenario.
- ❑ The Improved Technology alternative’s projects are also included in the preferred scenario. Development of more sophisticated flight and approach procedures, which do not necessarily require ground-based changes, will enhance the Phoenix metropolitan aviation system while resulting in limited negative impacts. The most important of these improvements is the development of curved approaches into the airports.
- ❑ The Maximized Airport Development alternative included numerous action-oriented projects. Based on the analysis of the alternative and the potential impacts, runway extensions are recommended for Buckeye Municipal, Chandler Municipal, and Phoenix-Sky Harbor International. Runway restoration is recommended for Memorial, while a taxiway extension is recommended for Glendale Municipal. New runways are recommended for Phoenix-Deer Valley, Phoenix-Goodyear, and Phoenix-Sky Harbor International. Curved precision approaches are included in the preferred scenario for Chandler, Mesa Falcon Field, Phoenix-Deer Valley, Phoenix-Goodyear, Scottsdale, and Williams Gateway. Additional precision approaches to Runway 25R and to both ends of the fourth runway are also included in the preferred scenario.
- ❑ The New Airport Development alternative analyzed potential development of a new general aviation and a new or supplemental commercial service airport. Development of a new general aviation

airport is included in the preferred scenario for further analysis, including a feasibility study, as well as continuation of Williams Gateway as a supplemental commercial airport for the Phoenix Region.

Development of this preferred scenario will enhance the Region's operational capacity, provide for a more efficient and safe aviation environment, and maximize the existing facilities and services that are currently available in the metropolitan area. Implementation of the preferred scenario will require further study and consideration, including detailed airport-specific analysis.

## **Policy Considerations**

The RASP has undertaken significant analysis of airport-specific projects and their potential impacts. The analysis has shown that additional study will be needed prior to further consideration, but that there are also policy considerations. The RASP provides an overview of the needs from a Regional perspective, but all projects must be initiated by sponsors who have jurisdiction over their airports.

The following are policy considerations that have been identified in the evaluation of recommendations for the MAG RASP:

- ❑ **Airspace enhancements:** The RASP has included development of additional runways and improved instrument approach capabilities that will enhance the ability of the system to accommodate future demand in the preferred scenario. All of these changes will dictate analysis of airspace requirements, including how to integrate these improvements into the existing airspace structure. Significant analysis of potential impacts to Luke's existing airspace needs and Phoenix-Sky Harbor International was conducted, however, a systemwide analysis of how implementing all of these projects would impact the airspace was not prepared. In addition, it is assumed that as technology improvements are made that the impact may be reduced, but is not known at this time. While a single project can be accommodated within the existing airspace environs based on current technology, when combined, the total impact of the recommendations will require more detailed analysis, including computer-aided airspace modeling wherein these improvements are analyzed together as a "single improvement" versus as individual projects. Airspace modeling may also afford the opportunity to examine how the new technological advances related to approach procedures may impact the airspace requirements.
- ❑ **Environmental impacts:** The RASP primarily evaluated noise impacts as a result of the alternatives. The noise impact analysis was based on existing available noise contours, supplementing these contours with development of estimated noise impact areas where identified. Prior to implementation of projects, additional environmental review would be required, including noise and other environmental categories such as air quality.
- ❑ **Land use:** As part of the noise evaluation in the alternatives analysis, the impacts to incompatible land uses near airports were identified. This cursory analysis also reviewed the State's policies regarding airport land use compatibility. Arizona has several statutes in place that were developed to reflect the importance of addressing airport noise including Airport Influence Area, Military Airport Registry, Military Airport Disclosure and Public Airport Disclosure. Many of the airports have implemented Public Airport Disclosure and Luke has complied with Military Airport Registry and Disclosure, but none of the MAG airports have implemented Airport Influence Area which serves as a notification that properties that are located in the vicinity of an airport may be impacted by noise levels of aircraft overflights. Consideration of this statute and its ability to impact future airport development should be part of follow-on planning efforts for the MAG airports. In addition to noise issues, the location of other incompatible uses, such as the gas storage facility that was planned near Luke Air Force Base, should also be considered for the long-term preservation of the Region's airport system. The land uses and zoning around airports should consider the need for potential airport expansion to accommodate growth projected for airports in the Region. As part of a feasibility study

for a new airport, land uses would be a significant evaluation factor in determining the viability of constructing a new general aviation airport in the Region.

**Comparison of Alternatives - Working Papers 4, 5 , Draft 1 Working paper 6, Draft 2 Working Paper 6**

	<b>Working Paper #4 - Alternatives</b>	<b>Working Paper No 5 - Evaluation of Alternatives</b>	<b>Draft 1 Working Paper #6 - “Preferred Scenario”</b>	<b>Draft 2 Working Paper #6 “Preferred Scenario”</b>
Buckeye	Longer runway, precision approach	Longer runway, precision approach	Longer runway, precision approach deleted because of impact on Luke	Same as 1 <sup>st</sup> Draft except specify curved precision approach for airspace compatibility
Chandler	Longer runway, precision approach	Longer runway, precision approach	Longer runway, precision approach deleted because of airspace issues	Longer runway, precision approach restored but specified curved precision approach for airspace compatibility
Glendale	Longer runway, precision approach	Longer runway deleted because it has already been built, precision approach	Precision approach deleted because of impact on Luke	Same as 1 <sup>st</sup> Draft, except specify curved precision approach for airspace compatibility
Memorial	Restoration of runway, new taxiway, non-precision approach	Restoration of runway, new taxiway, non-precision approach	Restoration of runway. Evaluation of alternatives showed problem with non-precision approach from an airspace standpoint so it was deleted	Restoration of runway. (Qualification based on input received that restoration of the runway does not have to be in the same orientation and location as existing runway)
Mesa	Precision approach	Precision approach	Precision approach	Same as Draft 1, except specify curved precision approach for airspace compatibility
Phoenix Deer Valley	Parallel runway, precision approach	Parallel runway, precision approach	Parallel runway, qualify precision approach noting it is from the east to reduce potential conflict with Luke	Same as Draft 1, except specify curved precision approach for airspace compatibility

Phoenix Goodyear	Parallel runway, precision approach	Parallel runway, precision approach	Parallel runway, precision approach from the East, to reduce conflict with Luke	Same as Draft 1, except specify curved precision approach for airspace compatibility
Phoenix Sky Harbor	4 <sup>th</sup> runway, additional precision approach, additional terminal	4 <sup>th</sup> runway, additional precision approach, additional terminal	4 <sup>th</sup> runway deleted based on consultant evaluation, additional precision approach, additional terminal; Airport People Mover extracted from Status Quo Scenario.	4 <sup>th</sup> runway reinstated for airspace testing. Additional precision approach, additional terminal, taxiway enhancements, Automated People Mover. Runway extension moved from south runway to middle runway. South runway extension more constrained. Connecting taxiway added because added to ADOT program. Taxiway enhancements on middle runway added for operational efficiency; Automated People Mover extracted from Status Quo Scenario.
Pleasant Valley	Pave runway, parallel taxiway and non-precision approach	Pave runway, parallel taxiway and non-precision approach	Pave runway, parallel taxiway and non-precision approach	Enhancement of Pleasant Valley airport eliminated because of impact on Luke Retention of current facilities
Scottsdale	Additional parallel taxiway, precision approach	Additional parallel taxiway deleted because already built, precision approach	Precision approach, additional terminal space part of maximized development scenario	Same as Draft 1, except curved precision approach to reduce airspace interactions
Wickenburg Municipal	Longer runway, non-precision approach	Longer runway, non-precision approach	Longer runway, non-precision approach	Longer runway, non-precision approach



Williams Gateway	Longer runway, precision approach, additional terminal space	Longer runway, precision approach, additional terminal space, additional runway. Additional runway based on demand capacity analysis, and potential enhancements to airspace compatibility with Phoenix Sky Harbor International Airport	Precision Approach, Additional runway, additional terminal space, longer runway. ( Longer runway was inadvertently omitted from Scenario, but should have been included)	Precision approach, additional runway runway eliminated, additional terminal space, longer runway (Longer runway inadvertently omitted from draft but should have been included). Additional runway eliminated because of potential reduction in capacity, the fact that alternative approach procedures could provide same benefits and lack of sponsor support
Wickenburg Forepaugh	Develop site as an airport	Develop site as an airport since it offers more expansion opportunity than the current Wickenburg Airport	Removed because of concerns over airspace impact on Luke.	Same as Draft 1. However, at July 1, 2004 MAG RASP TAC meeting, Luke accepted further airspace analysis of Forepaugh Airport as long as Wickenburg continues to work with Luke on the issue. Change would need MAG RASP Policy Committee approval

MAG Regional Aviation System Plan Update  
Statement by the Friends of Pleasant Valley Airport, Inc  
Regarding Working Paper #6  
June 07,2004

The Friends of Pleasant Valley Airport, Inc., composed of pilots, owners, FBO, and other interested persons would like to see Pleasant Valley Airport (PVA) remain a future option with MAG for a General Aviation Airport. We believe its location is compatible with and makes a contribution to the overall aviation needs of Maricopa County.

PVA has conducted over a million operations in its 27-year existence. It is one of the most active glider airports in the country. We believe Pleasant Valley Airport has introduced more individuals to aviation than most other general aviation airports in the state. Over 50,000 operations occurred at PVA last year alone.

We acknowledge the State and Peoria's General Plan does not call for a continuing airport in this location. We also acknowledge the concerns of Luke Air Force Base. We intend however, to work with the various authorities to find a compatible resolution to this impasse and concerns. We are not professional government activists. We work, we have families and we fly mostly on the weekends. We are late in responding but our response is genuine and sincere.

We realize there are no easy solutions to establishing an airport system that serves all interests. There will be conflicts between competing airspace users that will be resolved by improvements and changes to the Terminal Control Area. (TCA). Airports once dismissed or lost are rarely recovered. We are only asking that PVA not be dismissed today for tomorrow conditions and government interests may change.

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MAG Regional Aviation System Plan Policy Committee Membership  
As of July 7, 2004

Glendale	Mayor Elaine Scruggs, Chair
Cave Creek	Mayor Vincent Francia
Chandler	Councilmember Martin Sepulveda
Gilbert	Councilmember Dave Crozier
Goodyear	Councilmember Ken Porter
Maricopa County	Supervisor Fulton Brock
Mesa	Mayor Keno Hawker
Phoenix	Councilmember Peggy Bilsten
Scottsdale	Councilmember Robert Littlefield
Surprise	Councilmember Thomas Allen
Tempe	Mayor Elect Hugh Hallman
Wickenburg	Councilmember Dave Lane
Arizona Air National Guard	Lt. Colonel Khris Greene
Arizona Dept. of Transportation	Kim Stevens
Luke AFB	Colonel Peter Costello
Federal Aviation Administration	Richard Dykas